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CROSS-CULTURAL VALIDITY OF A SPHERICAL CONCEPTUAL MODEL FOR PARENT BEHAVIOR.

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THE CROSS-CULTURAL VALIDITY OF AN EVOLVING CONCEPTUAL MODEL FOR PARENT BEHAVIOR WAS INVESTIGATED. PREVIOUS RESEARCH STUDIES SUGGEST THAT THE PARENT BEHAVIOR DIMENSIONS OF SEVERAL CONCEPTUAL MODELS COULD BE INTEGRATED BY VISUALIZING THESE DIMENSIONS AS PLOTTED ON THE SURFACE OF A SPHERE. THE PROPOSED SPHERICAL CONCEPTUAL MODEL WAS OBTAINED USING DATA FROM AMERICAN SUBJECTS. WHETHER DIMENSIONS AND CONCEPTUAL NETWORKS COULD BE GENERATED FROM THE DATA OF FRENCH SPEAKING BELGIANS WAS INVESTIGATED. STUDENTS FROM FOUR PUBLIC HIGH SCHOOLS IN LIEGE, BELGIUM RESPONDED TO THE CHILD'S REPORT OF PARENT BEHAVIOR INVENTORY (CR-PBI). CORRELATION MATRICES WERE COMPUTED ON EACH OF THE 18 SCALES FOR BOTH PARENTS AND INDEPENDENTLY FOR BOYS AND GIRLS. THE FACTOR STRUCTURE WAS USED TO GENERATE A SPHERICAL CONFIGURATION OF PARENT BEHAVIOR CONCEPTS. THE FACTOR STRUCTURE FOR THE BELGIAN SAMPLE WAS FOUND SIMILAR TO THE AMERICAN. THREE DIMENSIONS ACCOUNTED FOR THE MAJOR PART OF THE COMMON VARIANCE OF THE PARENT BEHAVIOR SCALES IN BOTH CULTURES. THESE RESULTS PROVIDE A BASIS FOR COORDINATION OF THE DIVERSE CONCEPTUAL SCHEMES PREVIOUSLY USED TO DESCRIBE PARENT BEHAVIOR. ADDITIONAL CROSS-CULTURAL STUDIES APPEAR TO BE HIGHLY DESIRABLE. (SK)

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Cross-Cultural Validity of a Spherical Conceptual Model for Parent Behavior

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In this paper we will investigate the cross-cultural validity of an evolving conceptual model for parent behavior. Symonds (1939), through his review of the historical development of concepts of parent behavior, initially attempted to isolate two major dimensions of that behavior. His work called attention to the importance of both precise description and systematic classification. Subsequently Roe (1957), Schaefer (1959, 1961) and Slater (1961) independently developed two-dimensional models of parent behavior. However, an early factor analysis of parent behavior ratings by Lorr and Jenkins (1953), recent analysis of parent behavior ratings by Becker (1964), and research in which more detailed and differentiated reports of parent behavior were collected from children (Roe and Siegelman, 1963; Siegelman, 1965; and Schaefer, 1965b) have isolated three major parent behavior dimensions. Schaefer (1965b) has suggested that the several conceptual models might be integrated by visualizing the dimensions as plotted on the surface of a sphere. Visualizing the dimensions on a conceptual surface would clarify their interrelationships by revealing identical, neighboring, overlapping, independent, and opposed dimensions and might also reveal sectors for which concepts have not yet been developed.

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The data which led to the proposal of a spherical conceptual model of parent behavior were obtained from American subjects. The research reported here was designed to determine whether similar dimensions and conceptual networks would be generated by data obtained from French-speaking Belgian subjects (Walloons). If an analysis of Belgian children's reports of parent behavior would support the spherical model which had been developed from American data, the applicability of the model would be extended and should be further explored in other Western and non-Western cultures. If such studies provide further replication of the conceptual model, the possibility of cross-cultural generalization of research on parent-child relationships would be suggested. Also a single, cross-culturally valid, conceptual scheme might be developed for analyses and comparisons of parental behavior in clinical, social, and cultural studies.

Method

The method that was selected for translation was the revised version of the Child's Report of Parent Behavior Inventory (CR-PBI) (Schaefer, 1965a), that was developed from item and factor analyses (Schaefer, 1965b) of the initial version. The revised CR-PBI includes 18 scales of either eight or 16 items each. The items are descriptions of concrete, specific, easily observable parent behaviors. The subject indicates whether the item is Like, Somewhat Like, or Not Like his parent's behavior on separate but identical forms for mother and father.

The revised CR-PBI has been adapted for and translated into French (Renson, 1965) by the senior author, a French-speaking Belgian, after five years of residence, study and teaching in the United States. In order to insure the psychological equivalence of the American and French versions, the translator

interviewed Americans of varied social backgrounds to explore the range of meanings of each item. The translation is an attempt to replicate the nuances of meaning and the idiomatic character of the items. The initial translation was given to 30 Belgian and French natives who were residents of the United States. The final French version of the CR-PBI was developed from the responses and criticisms of the pilot group.

The French form of the CR-PBI was administered to groups of no more than 30 children, either by the senior author or by teachers who had been carefully instructed in the procedure to be followed. Although the reports were anonymous, a numerical code was used to match the CR-PBI reports with sex of child, age, family income, and parental education and occupation that were reported by the subjects on separate forms.

The subjects were 182 students of four public high schools of the city of Liege, Belgium. Academic and vocational schools were chosen to insure a wide range of socio-economic status for the samples of 96 boys and 86 girls. The boys range in age from 13 to 18, with a mean of 15.17; the girls from 14 to 18, with a mean of 15.57.

Results

Separate correlation matrices were computed for the 18 scale scores for father and for 18 scale scores for mother, independently for boys and for girls (Renson, 1965). The four correlation matrices of boys' and girls' reports of paternal and maternal behavior were factor analyzed by the principal components method (Hotelling, 1933). Five principal components were extracted but only the three components with mean Eigenvalues greater than one were orthogonally rotated by the varimax method (Kaiser, 1956). Coefficients of congruence (Harman, 1960) were computed to determine whether similar factors had been found for the four matrices. The coefficients ranged from .91 to .99 for Factor I, from .88 to .95 for Factor II, and from .57 to .96 for Factor III, with only one coefficient falling below .81.

The relatively high congruence of these factors provided the justification for calculating a single correlation matrix for boys' and girls' reports of maternal and paternal behavior. The factor analysis of the combined data yielded the following Eigenvalues: I, 5.62; II, 4.12; III, 2.18; IV, .88; V, .68. The factor matrix derived from an orthogonal varimax rotation of the first three principal components is reported in Table 1.

Insert Table 1 about here

The first factor, in the combined analysis as well as in the separate analyses, had high positive loadings on Acceptance of Individuation, Acceptance, Positive Involvement, and Childcenteredness, and a high negative loading on Hostile Detachment. This factor is very similar to the factor of ACCEPTANCE vs. REJECTION which Schaefer (1965b) reported for American subjects, and the name was kept for the Walloon factor. The second factor has high loadings on Hostile Control, Control through Guilt and Control through Instilling Persistent Anxiety. An American factor that closely resembles this one was labelled PSYCHOLOGICAL CONTROL, and the Walloon factor retains that name. The third factor has its highest positive loadings on Nonenforcement, Lax Discipline and Extreme Autonomy, and its highest negative loading on Control. The corresponding American factor was interpreted as LAX CONTROL vs. FIRM CONTROL, and the name was kept for the Walloon factor.

Factors can be used to generate conceptual configurations that present a more detailed picture of the nomological network in which the scales are embedded (Cronbach and Meehl, 1955; Schaefer, 1959, 1965b, 1965c). Thus the three factors isolated in this study can be used to generate a spherical configuration of parent behavior concepts (Thurstone, 1947; Schaefer, 1965b; 1965c). In order to plot the configuration generated by this three-dimensional space the conceptual plane generated by Factors I and II was rotated to bring

the positive pole of all scales except Extreme Autonomy into a single hemisphere. The projections of the scales upon the surface of a sphere were determined by projecting all scale vectors to unit length (Thurstone, 1945) and computing the angles for a stereographic plot. A stereographic projection of the hemisphere generated the map of this conceptual space that is presented in Figure 1.

Insert Figure 1 about here

Discussion

The factor-structure for boys' and girls' reports of maternal and paternal behavior are highly similar for this Walloon sample as they were for the American sample (Schaefer, 1965). These findings suggest the validity of a single conceptual framework for parent behavior for both sexes of parents and both sexes of children. Differences in scale scores might be found by sex of parent and by sex of child (Droppleman and Schaefer, 1963) but the common factorial structure suggests that perceptions of parent behavior are similarly organized for different groups.

Analysis of the Walloon data on children's perceptions of parent behavior led to findings which greatly resemble the American findings (Schaefer, 1965b). In both cultures, only three dimensions account for a major amount of the common variance of these parent behavior scales. Additional support from American data for a three-dimensional conceptual framework for parent behavior has been provided by factor analyses of parent behavior ratings (Lorr and Jenkins, 1953; Becker, 1964) and of other inventories of children's perceptions of parent behavior (Roe and Siegelman, 1963; Siegelman, 1965).

Comparison of the dimensions isolated by factor analysis from the American and Walloon studies using the Child's Report of Parental Behavior Inventory revealed essential agreement. Factors that were labelled ACCEPTANCE vs. REJECTION, LAX CONTROL vs. FIRM CONTROL, and PSYCHOLOGICAL CONTROL were found for both national groups. Although the dimension of ACCEPTANCE vs. REJECTION appears highly similar to factors isolated in the other studies cited above, the other dimensions appear to be related but not identical with the factors of ANXIOUS EMOTIONAL INVOLVEMENT vs. CALM DETACHMENT and RESTRICTIVENESS vs. PERMISSIVENESS proposed by Becker (1964), with the factors of CASUAL vs. DEMANDING and OVERT ATTENTION proposed by Roe and Siegelman (1963), and with the factors of DEMANDING and PUNISHMENT proposed by Siegelman (1965). However the overlapping elements of these factors suggest that they may all relate to various sectors of a three-dimensional configuration or parental behavior sphere. A search for identical conceptual configurations rather than identical dimensions might facilitate the integration of the various studies.

One interpretation of the map of the parental behavior sphere presented here is that it reveals the nomological network within which each of the scales is embedded (Cronbach and Meehl, 1955). Thus the meaning of each of the scales of Hostile Control, Control through Instilling Persistent Anxiety, and Control through Guilt is clarified by their close proximity, as well as by the neighboring variables of Intrusiveness, Enforcement, and Control through Withdrawal of Relationship. The fact that Control through Withdrawal of Relationship falls between Hostile Control and Hostile Detachment and close to Rejection supports an interpretation that this scale measures a very conditional acceptance of the child. The locations can also indicate subtle variations in the implications of

the scales. For example, of the scales that have loadings on a factor of LAX CONTROL, Lax Discipline is more highly related to Childcenteredness perhaps indicating more indulgent parental behavior; Nonenforcement is nearer to Hostile Detachment perhaps indicating a more detached indifference to the child's behavior; and Inconsistent Discipline falls in the center of a sector framed by Hostile Detachment, Control through Guilt and Nonenforcement. These correlates suggest parental inconsistency as experienced by the child.

The results of the present study are an important step toward the cross-cultural validation of a spherical conceptual model for parent behavior. The amazing similarity between the organization of American and French-speaking Belgian children's perception of parent behavior, and the apparent convergence of a number of existing empirical studies upon a three-dimensional conceptual framework, provide a basis for coordination of diverse conceptual schemes previously used to describe parent behavior.

The high similarity of factorial structures for American and French-Belgian subjects suggests the desirability of additional studies in other Western and non-Western cultures. If these studies were to reveal dimensions of parent behavior similar to the American and French-Belgian findings, then a single configurational model for parent behavior and a cross-culturally valid psychology of parent-child relationships might be developed by further cross-cultural research.

References

Becker, W. C. Consequences of different kinds of parental discipline. In Lois W. and M. L. Hoffman (Eds.), Annual review of child development. Vol. 1. New York: Russell Sage Foundation, 1965.

Cronbach, L. J., & Meehl, P. E. Construct validity in psychological tests. Psychological Bulletin, 1955, 52, 281-302.

Droppleman, L. F., & Schaefer, E. S. Boys' and girls' reports of maternal and paternal behavior. Journal of Abnormal and Social Psychology, 1963, 67, 648-654.

Harman, H. H. Modern factor analysis. Chicago: University of Chicago Press, 1960.

Hotelling, H. Analysis of a complex of statistical variables into principal components. Journal of Educational Psychology, 1933, 24, 417-441, 498-520.

Kaiser, H. F. The varimax method in factor analysis. Unpublished doctoral dissertation, Univer. of California, 1956.

Lorr, M., and Jenkins, R. L. Three factors in parent behavior. Journal of Consulting Psychology, 1953, 17, 306-308.

Renson, G. J. Belgian children's perception of parental behavior as measured by Schaefer's technique. Unpublished master's thesis, George Washington University, 1965.

Roe, Anne. Early determinants of vocational choice. Journal of Counseling Psychology, 1957, 4, 212-217.

Roe, Anne, & Siegelman, M. A. Parent-child relations questionnaire. Child Development, 1963, 34, 355-369.

Schaefer, E. S. A circumplex model for maternal behavior. Journal of Abnormal and Social Psychology, 1959, 59, 226-235.

Schaefer, E. S. Converging conceptual models for maternal behavior and for child behavior. In J. C. Glidewell (Ed.), Parental attitudes and child behavior. Springfield, Ill.: C. C. Thomas, 1961. Pp. 124-146.

Schaefer, E. S. Children's reports of parental behavior: an inventory. Child Development, 1965, 36, 413-424.

Schaefer, E. S. A configurational analysis of children's reports of parent behavior. Journal of Consulting Psychology, 1965, 29, 552-557.

Schaefer, E. S., & Lauterbach, C. G. Mapping the projections of child variables upon a spherical parent-behavior model and vice versa. American Psychologist, 1965, 20, 502. (Abstract)

Siegelman, M. Evaluation of Bronfenbrenner's questionnaire for children concerning parent behavior. Child Development, 1965, 36, 163-174.

Slater, P. E. Parent behavior and the personality of the child. Journal of Genetic Psychology, 1962, 101, 53-68.

Symonds, P. S. The psychology of parent-child relationships. New York; London: D. Appleton-Century, 1939.

Thurstone, L. L. Multiple factor analysis. Chicago: University of Chicago Press, 1947.

Table 1

Orthogonally Rotated Composite Factor Matrix for Boys' and Girls' Reports of Maternal and Paternal Behavior

Scale	I	II	III
Acceptance of Individuation	.81	.22	-.15
Acceptance	.91	.11	-.11
Positive Involvement	.89	-.07	.10
Child-centeredness	.85	-.17	-.11
Possessiveness	.54	-.52	-.05
Intrusiveness	.34	-.67	.16
Control through Guilt	.06	-.83	-.07
Hostile Control	.06	-.86	.15
Control through Instilling Persistent Anxiety	-.12	-.76	.09
Control through Withdrawal of Relationship	-.38	-.63	-.16
Rejection	-.56	-.64	-.28
Hostile Detachment	-.74	-.42	-.28
Inconsistent Discipline	-.20	-.50	-.48
Non-Enforcement	-.13	-.07	-.72
Extreme Autonomy	.05	.22	-.61
Lax Discipline	.45	.07	-.63
Control	.14	-.60	.51
Enforcement	-.20	-.68	.39

Figure 1

A Map of Walloon Children's Reports of Parent Behavior